	Application No.	Applicant(s)	
Notice of Allowability	10/634,694	LIM ET AL.	
	Examiner	Art Unit	
	Dmitry Levitan	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *1/16/08*.

2. ☒ The allowed claim(s) is/are *1-4, 6-9, 11 and 13 renumbered as 1-3, 5,6,8,9,7,4 and 10*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None of the:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☒ Other *Attachment A, Attachment B.*.

Amendments, filed 11/08/07 and 1/16/08 have been entered.

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with

Stephen Gigante on 1/24/08.

The application has been amended as follows:

a.   In the specification, paragraph beginning on page 1, line 18, has been amended

per Attachment A.

b.   Claims have been amended per Attachment B.

Allowable Subject Matter

2.   Claims 1-4, 6-9, 11 and 13 allowed.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The

examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dmitry Levitan
Primary Examiner
Art Unit 2616

DMITRY LEVITAN
PRIMARY EXAMINER

Attachment A.

<u>IN THE SPECIFICATION</u>

Please replace the paragraph beginning on Page 1, line 18, as follows:

The standardization of Gigabit Ethernet and MAC technology for the ATM-PON (Asynchronous Transfer Mode Passive Optical Network) has been completed. In the ATM-PON, upward or downward transmission of frames, each of which consists of a predetermined number of ATM cells, is used for communication purposes. In particular, an OLT (Optical Line Termination) inserts downward cells in the transmission frame, and then the downward cells are distributed to each ONU (Optical Network Unit) in the PON having a tree-shaped structure. Other details of the Gigabit Ethernet and the ATM-PON protocols are described in the IEEE 802.3z <u>dated January 23, 1997,</u> and ITU-T G.983.1 <u>dated October 13, 1998,</u> and<u>from which</u> the contents of <u>both documents</u> which are incorporated herein by reference.

Attachment B.

IN THE CLAIMS

1. (Previously Presented) A method for discovering by an OLT (Optical Line Termination) OAM (Operations, Administration & Maintenance) capabilities of multiple ONUs (Optical Network Units) connected to the OLT in an Ethernet passive optical network, the method comprising the steps of:

assigning OLT identifications for identifying each of the ONUs according to registration requests from the ONUs connected to the OLT, and starting by the OLT an OAM capability discovery operation for the OAM capabilities of the ONUs by transmitting first OAM capability information messages, which requests OAM capabilities of the ONUs, respectively; and

receiving by the OLT second OAM capability information messages that include OAM capabilities of the respective ONUs, said second OAM capability messages being sent by the respective ONUs in response to a request for OAM capabilities from the OLT in the first OAM capability information message;

wherein the OAM capability information message includes a field for representing an operation state of the OAM capability information message.

2. (Previously Presented) The method as claimed in claim 1, further comprising a step of transmitting by the OLT a third OAM capability information message for reporting completion of the OAM capability discovery operation to a predetermined ONU from among the respective ONUs when the OLT receives the second OAM capability information message from the predetermined ONU.

3. (Previously Presented) The method as claimed in claim 1, wherein a structure of a data field constituting each of the messages has a first field and a second field, which are added to a general structure of an OAM state PDU (packet data unit) data field, the first field storing static allocated bandwidth information in order to transmit the OAM capability when the OAM capability discovery operation is performed, and the second field storing information on a network topology.

4. (Currently Amended) A method for discovering by an OLT (Optical Line Termination) OAM (Operations, Administration & Maintenance) capabilities of multiple ONUs (Optical Network Units) connected to the OLT in an Ethernet passive optical network, the method comprising the steps of:

(a) assigning by the OLT identifications for identifying each of the ONUs according to registration requests from the ONUs connected to the OLT, and transmitting by the OLT first OAM capability information messages, which requests OAM capabilities of the ONUs, respectively, for starting an OAM capability discovery operation for the ONUs to the ONUs;

(b) waiting by the OLT for reception of second OAM capability information messages for reporting OAM capabilities from the respective ONUs during a first predetermined period of time after transmission of the first OAM capability information messages; and

(c) transmitting by the OLT third OAM capability information messages for reporting completion of the OAM capability discovery operation by the OLT to the respective ONUs having transmitted the second OAM capability information messages, when the second OAM capability information messages are received from the ONUs;

wherein the OAM capability information message includes a field for representing an operation state of the OAM capability information message.

5. (Canceled)

6. (Previously Presented) The method as claimed in claim 4, further comprising a step of retransmitting by the OLT the first OAM capability information messages for starting the OAM capability discovery operation for the ONUs according to the step (a), when the second OAM capability information messages are not received from the respective ONUs during the first predetermined period of time for which the OLT waits the reception of the second OAM capability information messages.

7. (Previously Presented) The method as claimed in claim 4, wherein each of the

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PAGE 4/6 * RCVD AT 1/24/2008 1:35:23 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-5/43 * DNIS:2733093 * CSID:12012269246 * DURATION (mm-ss):01-42

respective ONUs receives the first OAM capability information message for starting the OAM capability discovery operation from the OLT, wherein each ONU of the respective ONUs performs the following steps:

transmits the second OAM capability information message for reporting OAM capability of the ONU to the OLT, and

waits for the third OAM capability information message from the OLT for reporting the completion of the OAM capability discovery operation for the ONU during a second predetermined period of time.

8. (Previously Presented) The method as claimed in claim 4, wherein a structure of a data field constituting each of the messages has a first field and a second field, which are added to a general structure of an OAM state PDU (packet data unit) data field, the first field storing static allocated bandwidth information in order to transmit the OAM capability when the OAM capability discovery operation is performed, and the second field storing information on a network topology.

9. (Previously Presented) The method as claimed in claim 6, wherein the ONU retransmits the second OAM capability information message for reporting the OAM capability of the ONU when the third OAM capability information message for reporting the completion of the OAM capability discovery operation for the ONU is not received from the OLT during the second predetermined period of time

10. (Canceled)

11. (Previously Presented) The method as claimed in claim 1, wherein the field for representing the operation state of the OAM capability information message includes one of:

a first set value for representing that the OLT starts the discovery operation for the OAM capabilities of the ONUs;

a second set value for representing report of the OAM capabilities of the ONUs;

a third set value for representing the completion of the OAM capability

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discovery operation by the OLT; and

a fourth set value for representing an OAM state PDU after the completion of the OAM capability discovery operation.

12. (Canceled)

13. (Currently Amended) The method as claimed in claim ~~1~~24, wherein the field for representing the operation state of the OAM capability information message includes one of:

a first set value for representing that the OLT starts the discovery operation for the OAM capabilities of the ONUs;

a second set value for representing report of the OAM capabilities of the ONUs;

a third set value for representing the completion of the OAM capability discovery operation by the OLT; and

a fourth set value for representing an OAM state PDU after the completion of the OAM capability discovery operation.